

What is claimed is:

1. A polishing pad for a semiconductor wafer, which comprises a substrate for a polishing pad provided with a through hole penetrating from surface to back, and a light transmitting part fitted in said through hole,

wherein said light transmitting part comprises a water-insoluble matrix material and a water-soluble particle dispersed in said water-insoluble matrix material, and

wherein a content of said water-soluble particle is not less than 0.1% by volume and less than 5% by volume based on 100% by volume of the total amount of said water-insoluble matrix material and said water-soluble particle.

2. The polishing pad for a semiconductor wafer according to Claim 1, wherein at least a part of the water-insoluble matrix material is a crosslinked polymer.

3. The polishing pad for a semiconductor wafer according to Claim 2, wherein said crosslinked polymer is crosslinked 1,2-polybutadiene.

4. The polishing pad for a semiconductor wafer according to Claim 1, wherein said light transmitting part is thinned.

5. The polishing pad for a semiconductor wafer according to Claim 1, wherein a light transmittance of said light transmitting part at a wavelength between 400 and 800nm is 0.1% or more, or an integrated transmittance of said light transmitting part in a wavelength range between 400 and 800nm is 0.1% or more, when a thickness of said light transmitting part is 2mm.

6. A polishing pad for a semiconductor wafer, which comprises a substrate for a polishing pad provided with a through hole penetrating from surface to back, a light transmitting part fitted in said through hole, and a fixing layer formed on a backside of at least said substrate for a polishing pad among said substrate for a polishing pad and said light transmitting part for fixing to a polishing apparatus,

wherein said light transmitting part comprises a water-insoluble matrix material and a water-soluble particle dispersed in said water-insoluble matrix material, and

wherein a content of said water-soluble particle is 0.1 to 90% by volume based on 100% by volume of the total amount of said water-insoluble matrix material and said water-soluble particle.

7. A laminated body for polishing of a semiconductor wafer, which comprises a polishing pad for a semiconductor wafer as defined in claim 1 or 6, and a supporting layer laminated on a backside of said polishing pad for a semiconductor wafer, wherein said laminate body has light transmitting properties in a laminated direction.

8. A laminated body for polishing of a semiconductor wafer, which comprises a substrate for a polishing pad provided with a through hole penetrating from surface to back, a light transmitting part fitted in said through hole, a supporting layer laminated on a backside of at least said substrate for a polishing pad among said substrate for a polishing pad and said light transmitting part, and a fixing layer formed on a backside of said supporting layer for fixing to a polishing apparatus,

wherein said light transmitting part comprises a water-insoluble matrix material and a water-soluble particle dispersed in said water-insoluble matrix material, and

wherein a content of said water-soluble particle is 0.1 to 90% by volume based on 100% by volume of the total amount of said water-insoluble matrix material and said water-soluble particle.

9. A method for polishing a semiconductor wafer using a polishing pad for a semiconductor wafer as defined in claim 1 or 6, which comprises a process of detecting a polishing endpoint by the use of an optical endpoint detecting apparatus.

10. A method for polishing a semiconductor wafer using a laminated body for polishing of a semiconductor wafer as defined in claim 7 or 8, which comprises a process of detecting a polishing endpoint by the use of an optical endpoint detecting apparatus.